

REMARKS

The following remarks are made in response to the non-final Office Action mailed February 16, 2006, in which claims 1, 6-8, 10-15, 20, 25 and 26 were rejected. With this Response, claims 1, 7, 8, 10-12, 14, 15, 20 and 26 have been amended, and claims 6, 13 and 25 have been canceled. Claims 1-5, 7-12, 14-17, 20-24 and 26 remain pending in the application, with claims 2-5, 9, 16-17 and 21-24 having been previously withdrawn in response to the Election/Restriction Requirement. Claims 18-19 were canceled following their restriction in the Office Action dated June 22, 2005.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 6-8, 10, 12, 20, 25 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hill (U.S. Patent No. 5,397,106) in view of Malachowski et al. (U.S. Patent No. 5,219,159).

The Office Action alleged Hills discloses a sheet material trimming apparatus (Fig. 1) comprising: a first cover (12') arranged to trim an edge (11) of a sheet material (1) in a first direction (shown by the arrows in the first step); and a second cutter (17') arranged to trim an edge (7) of a sheet material (1) in a second direction (shown the arrows in the second step) different from the first direction. The Office Action acknowledges that Hill fails to disclose a drive roller as claimed. The Office Action attempts to overcome the acknowledged deficiency of Hill by citing Malachowski et al. Malachowski et al. is alleged to disclose a drive system having a drive roller (24) for advancing sheet material (100) in first direction by rotation of the drive roller (24) and for translating the sheet material (100) in a second direction by a translation of the drive roller (24). (Referencing Figs. 1A-1C of Malachowski et al.). The Office Action alleges it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the Malachowski et al. drive system as a station on the Hill apparatus prior to the cutting steps in Hill for the purpose of aligning sheets before cutting.

The rejections are respectfully traversed. Referring to Section 706.02 (j) of the MPEP, to establish a *prima facie* case of obviousness, three basic criteria must be met:

- (1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine reference teachings;
- (2) There must be reasonable expectation of success;
- (3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

Amendment and Response

Applicant: Steven W. Trovinger

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Title: METHOD AND DEVICE FOR TRIMMING SHEET MATERIAL

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Appellant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (F.E.D. Cir. 1991).

Independent claim 1 has been amended to incorporate the elements of dependent claim 6 (now canceled). As amended, independent claim 1 claims a sheet material trimming apparatus, comprising: a first cutter arranged to trim an edge of a sheet material in a first direction; a second cutter arranged to trim an edge of the sheet material in a second direction different from the first direction; and a drive system having a drive roller for advancing the sheet material in the first direction by rotation of the drive roller and for translating the sheet material in the second direction by translation of the drive roller, wherein the drive roller is mounted on a drive shaft and rotation of the drive shaft acts to both rotate and translate the drive roller.

Applicants respectfully submit that the combination of Hill and Malachowski et al. cannot support a case of prima facie obviousness as to the claims because, among other possible reasons, the combination of references fail to disclose all of the elements of the present invention. In particular, neither Hill nor Malachowski et al. teach or suggest **wherein the drive roller is mounted on a drive shaft and rotation of the drive shaft acts to both rotate and translate the drive roller.**

As acknowledged in the Office Action, Hill fails to disclose a drive roller for advancing sheet material in the first direction by rotation of the drive roller and for translating the sheet material in the second direction by a translation of the drive roller. Hill must therefore also necessarily fail to disclose wherein the drive roller is mounted on a drive shaft and rotation of the drive shaft acts to both rotate and translate the drive roller. Malachowski et al. fails to overcome the deficiency of Hill. In particular, rollers 24, 25, 26, 27 of Malachowski et al. are translated by lateral drive mechanism 120 which translates the entire frame and rod assembly upon which rollers 24, 25, 26, 27 are mounted. That is, in Malachowski et al. rotation of the drive shaft acts only to rotate the drive roller. Rotation of the drive shafts does not act to translate the drive roller. Accordingly, because the prior art references fail to teach or suggest all of the claim limitations of independent claim 1, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

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Dependent claims 7, 8, and 10 have been amended to depend directly from independent claim 1, which is allowable for at least the reasons set forth above. Accordingly, claims 7, 8, 10 and 11 are also in allowable condition and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Independent claim 20 has been amended to incorporate the elements of dependent claim 25 (now canceled). As amended, independent claim 20 claims a booklet making system for assembling plural sheets into a bound stack, comprising: a drive system for advancing sheet material in a first direction by rotation of a drive roller, wherein the drive roller is mounted on a drive shaft and rotation of the drive shaft acts to both rotate and translate the drive roller; a sheet material trimming apparatus for receiving the sheet material advanced by the drive system, the sheet material trimming apparatus including a first cutter arranged to trim an edge of a sheet material in a first direction; and a second cutter arranged to trim an edge of the sheet material in a second direction different from the first direction, and wherein the drive system is configured to translate the sheet material in a second direction by translation of the drive roller.

As discussed above with regard to amended independent claim 1, neither Hill nor Malachowski et al. teach or suggest wherein the drive roller is mounted on a drive shaft and **rotation of the drive shaft acts to both rotate and translate the drive roller**. Rather, as acknowledged in the Office Action, Hill makes no teaching or suggestion regarding a drive roller as claimed, and Malachowski et al. teaches only that rotation of the drive shaft acts to rotate the drive roller. Neither of the references teach or suggest rotation of the drive shaft acts to translate the drive roller. Accordingly, the references fails to teach or suggest all of the claim limitations of independent claim 20, and withdrawal of the rejection of independent claim 20 under 35 U.S.C. §103(a) is respectfully requested.

Dependent claim 26 has been amended to depend directly from independent claim 20, which is allowable for at least the reasons set forth above. Accordingly, withdrawal of the rejection of dependent claim 26 under 35 U.S.C. §103(a) is respectfully requested.

Independent claim 12 has been amended to incorporate claim language similar to that added to independent claims 1 and 20, above, and further incorporates the elements of dependent claim 13 (now canceled). As amended, independent claim 12 claims an apparatus for trimming sheet material, comprising: cutting means for trimming a first edge and a

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second edge of a sheet material in a first direction and a second direction; and drive means for moving the sheet material in two perpendicular directions for trimming the first and second edges with the cutting means, the drive means moving the sheet material in two perpendicular directions by rotating and translating a roller, wherein the roller is mounted on a threaded drive shaft and rotation of the drive shaft acts to both rotate and translate the roller.

As set forth above with regard to independent claims 1 and 20, **the Hill and Malachowski et al. references fail to teach or suggest that the drive shaft acts to both rotate and translate the roller.** Accordingly, the comments presented above with regard to independent claims 1 and 12 are equally applicable to amended independent claim 12. For at least these reasons, withdrawal of the rejection of claim 12 under 35 U.S.C. §103(a) is respectfully requested.

Claims 11 and 13-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hill (U.S. Patent No. 5,397,106) in view of Malachowski et al. (U.S. Patent No. 5,219,159) as applied to claims 1, 6, and 12 above, and further in view of Kamprath et al. (U.S. Patent No. 5,278,624).

The modified device of Hill is alleged to teach a device substantially as claimed, but is acknowledged as failing to disclose the drive shaft includes an external thread and the drive includes an internal thread. To overcome the acknowledged deficiency of the modified device of Hill, the Office Actions cite Kamprath et al. as disclosing a drive system for moving and aligning sheets comprising a drive shaft (48) with an external (52) and a drive roller (14) with an internal thread. The Office Action states that if unrestrained, the roller 14 would translate with rotation of shaft 48. However, with a holding or stopping mechanism, the roller 14 rotates in a single location. The Office Action concludes it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an external thread of the drive shaft and internal thread on the roller of the modified Hill device, as taught by Kamprath et al., and include appropriate stops for the purpose of better controlling rotational and translational movement of the roller.

Dependent claim 11 has been amended to depend directly from independent claim 1, which is allowable for at least the reasons set forth above. Kamprath et al. does not overcome the deficiencies of the modified Hill device, because Kamprath et al. teaches that rotation of the drive shaft acts to rotate the roller, such as when shaft 48 is rotated by drive 16

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via coupling 49 (see column 4, lines 61-65), but does not and cannot translate the roller due to the presence of fixed stops 62. Further, *translation* of the drive shaft also acts to rotate the roller (see column 5, lines 8-10). Nowhere does Kamprath et al. teach that rotation of the drive shaft acts to rotate and translate the roller 14. For at least these reasons, claim 11 is also in allowable condition and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

As noted above, the subject matter of dependent claim 13 has been incorporated into amended independent claim 12. Applicants respectfully submit that the combination of Hill, Malachowski et al. and Kamprath et al. cannot support a case of *prima facie* case of obviousness as to amended independent claim 12, because, among other possible reasons, the combination of references fail to disclose all the elements of the present invention. In particular, none of the references teach or suggest wherein the rotation of the drive shaft acts to both rotate and translate the roller.

In the device of Kamprath et al., the roller 14 is permanently restrained from translational movement by the stops 62. In fact, translational movement of roller 14 is unwanted, as translation of shaft 48 is intended and desired to cause differential rotation between roller 14 and roller 12. That is, Kamprath et al. teaches the avoidance of translation of roller 14. In Kamprath et al., rotation of the drive shaft acts to rotate the roller (such as when shaft 48 is rotated by drive 16 via coupling 49) (see column 4, lines 61-65). However, *translation* of the drive shaft also acts to rotate the roller (see column 5, lines 8-10). Nowhere does Kamprath et al. teach that rotation of the drive shaft acts to rotate and translate the roller 14. For at least these reasons, amended independent claim 12 is not made obvious in view of the combination of Hill, Malachowski et al. and Kamprath et al., and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Dependent claims 14 and 15 depend, either directly or indirectly, from independent claim 12, which is allowable for at least the reasons set forth above. Accordingly, withdrawal of the rejection of claims 14 and 15 under 35 U.S.C. §103(a) is respectfully requested.

Additionally, Applicants respectfully submit that the cited references fail to teach or suggest, alone or in combination, the subject matter of dependent claims 14 and 15. None of the references teach an engaged means having a first position and a second position, and wherein the rotation of the drive shaft with the engage mechanism at the first position causes

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the drive roller to rotate, and rotation of the drive shaft with the engage mechanism at the second position causes the drive roller to translate. Rather, as described above, the stops 62 of Kamprath et al. are fixed and do not have first and second positions allowing either rotation or translation of the roller 14. Further, with regard to dependent claim 8, the stops 62 of Kamprath et al. do not prevent rotation of the drive roller and in fact prevent translation of the drive roller.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1, 7, 8, 10, 11, 12, 14, 15, 20 and 26 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1, 7, 8, 10, 11, 12, 14, 15, 20 and 26 is respectfully requested.

Any inquiry regarding this Response should be directed to either Matthew B. McNutt at Telephone No. (612) 767-2510, Facsimile No. (612) 573-2005, or Susan E. Heminger at Telephone No. (650) 236-2738, Facsimile No. (650) 852-8063. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400


Respectfully submitted,

Steven W. Trovinger,

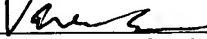
By his attorneys,

DICKE, BILLIG & CZAJA, PLLC
Fifth Street Towers, Suite 2250
100 South Fifth Street
Minneapolis, MN 55402
Telephone: (612) 573-2000
Facsimile: (612) 573-2005

Date: April 6, 2006
MBM:dmd:ivh


Matthew B. McNutt
Reg. No. 39,766

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By 
Name: Vanessa Carels